Power A Clean Future Ohio
LOCAL COMMUNITIES LEADING THE WAY

Land Usage

WHAT IS IT?

Land use involves the management and modification of natural environment or wilderness into built environment such as settlements and semi-natural habitats such as arable fields, pastures, parks, and managed woods. Natural land ecosystems (forests, grasslands, prairies, wetlands, etc.) constitute the largest source of carbon sequestration in the United States. Management and/or conversion of land uses affects sources and sinks of carbon and other greenhouse gases (GHGs). Land use and land management practices have a major impact on natural resources including water, soil, nutrients, plants and animals. Land use information can be used to develop solutions for climate change issues such as creating carbon captures, and natural resource management issues such as salinity and water quality.

WHY IS IT IMPORTANT?

The role of land usage activities in the mitigation of climate change has long been recognized. Mitigation achieved through activities in the land management sector, either by increasing the removals of GHGs from the atmosphere or by reducing emissions by sources, can be relatively cost-effective. Strategies can be used in both urban and rural settings. In a cost benefit analysis provided by Xavier University for the City of Cincinnati, a rough cost estimate of tree planting runs around $31,000 for proper planting and initial care for every 100 trees and a rolling maintenance estimate of $20 per tree per year. Savings related to stormwater retention, enhanced property value and reduced energy bills due to increased coverage were nearly ten times the monetary costs in ten years and more as trees age.

BENEFITS

Tree canopy break up urban heat islands, provide stability to land that is prone to landslides, reduce the cost of cooling for residents, reduce stormwater runoff and flooding during heavy rains, and reduce the concentrations of air pollutants

Reduce maintenance costs of mowing and other landscape upkeep

Provide residents a place to connect with nature and exercise outdoors

Urban forests can remove and store 0.77 megatons of carbon per acre

New tree plantings can remove and store 0.06 megatons of carbon over the first 10 years of its life

Prevention of deforestation for development saves 147.8300 megatons of carbon per acre saved

HOW CAN COMMUNITIES IMPLEMENT THIS POLICY?

Cities can work to create several different plans and guides to help manage development while protecting open space, parks and urban forests. Land usage practices can be implemented through city operations, city parks and with local community organizations.